

Remarks

The Examiner's reconsideration of the application is again urged in view of the amendments above, and additional comments which follow.

Claim amendments

Claim 14 has been cancelled, and the subject matter of claim 14 is added to the independent claims 42 and 44.

Claim 43 is cancelled and replaced by new claim 45. New claim 45 retakes the subject matter of claims 43 and 14, without the features of a spindle being stationary and the target being rotatable around its axis. These features are not essential for the purpose of the invention.

Claim dependency on claim 20 is redirected to claim dependency on claim 42, as obviously should have been done in the May 3, 2005 response. Claims previously depending on claim 43 are now made dependent to claim 45.

Arguments regarding the amended claims

General consideration.

It is respectfully brought to the Examiners attention that a distinction is to be made between the flange extremity, being a separate ring, and the second tubular section. According to amended claims 42, 44 and 45, these are clearly two distinct objects.

According to amended claims 42 and 44, the tubular sections have each their own inner and outer diameter. These two tubular sections are to be dimensioned in such a way that the outer diameter of the first tubular section is smaller than the inner diameter of the second tubular section, the second tubular section being axially slidable over the first tubular section. According to the amended claims, the coupling is to comprise a sealing ring, located between the outer

diameter of the first tubular section and the inner diameter of the second tubular section in a sliding overlapping contact area of this first and second tubular section.

According to the wording of the new claim 45, the tubular sections have each their own inner and outer tubular wall. These two tubular sections are to be dimensioned in such a way that the inner wall of the second tubular section is slidable over the outer wall end portion of the first tubular section creating an area of overlap. According to the amended claims, the coupling is to comprise a sealing ring, located in this area of overlap.

According to the wording of the amended or new claims, the flange extremity is provided by a distinct object being a separate ring. This distinct object is not used nor involved in creating this sliding overlapping contact area of this first and second tubular section.

As clearly shown in Fig. 3 of the present application, the separate ring is interposed between the tube end of the second tubular section and the clamping ring. Although the separate ring may be welded to the second tubular section, this separate ring is not to create the sliding overlapping contact area with the first tubular section, and remains a distinct object, being provided supplementary to the second tubular section.

For the sake of clarity, the applicants hereby provide two pages of drawings, being the drawings of the priority documents, annotated by the applicants as indicated below.

Amended claims 42, 44 and 45: Novelty over DE4105206

Taking above-mentioned consideration regarding the feature of a “separate ring” into account, the applicants respectfully disagree with the conclusion the Examiner that all features of amended claim 42 are anticipated by DE4105206.

According to the assertions of the Examiner on page 8 of the final office action, the second tubular section is to be considered as the object consisting out of the parts (2) and (6) of DE4105206. For the sake of clarity, the outer diameter of the first tubular section is indicated “Dout1” by the applicants in the attached annotated drawings. The inner diameter is indicated

“Din2*” by applicants.

The outer diameter of the first tubular section, consisting of the parts as indicated (1)+(3), is smaller than the inner diameter of the second tubular section (2)+(6). A sliding section between outer diameter of first tubular section and inner diameter of second tubular section is provided, (indication given by applicant “A”) in which a sealing ring (11) is present. The outer diameter of the first tubular section is generally parallel to the opposing surface of the inner wall of the second tubular element, from the sealing ring to the end of the first tubular section.

However, from this viewpoint, the flange extremity is not a distinct object, being a separate ring, but an integral part of the second tubular section. Hence, in such interpretation, the feature of a flange extremity being a separate ring is lacking.

Further, DE4105206 does not disclose the features of the clamp ring as in the amended claim 42. DE4105206 merely mentions the presence of a clamping ring (7), having a substantially cylindrical outer surface and being composed of clamping elements. The applicants respectfully point to the fact that in DE4105206, only one clamping element is shown. The shown clamping element has a U-shaped cross section with inward oriented recess. The recess encloses the abutment ring (of the first tubular section) and the flange extremity (being an integral part of the second tubular section) on the second tubular section.

DE4105206 does not disclose the recess to positively, solidly and axially clamp the abutment ring against the flange extremity. As indicated with arrow “opening”, an interstice is shown between flange extremity and abutment ring. There is no axial clamping established.

Further, DE4105206 is silent on the way how different clamping elements may be fixed to each other; no bolting means are disclosed to establish such fixing, and thus nor is disclosed how the axis of such bolting means would be positioned as compared to the ring periphery and the longitudinal axis of the tubular sections.

All these features are lacking from DE4105206.

The applicants thus assert that when using this point of view, DE4105206 does not disclose each and every feature of amended claim 42, and thus the claim is not anticipated.

Applicants turn now to an alternative point of view to which the applicants disagree, namely that the flange extremity as a separate ring is disclosed in DE4105206.

The Examiner requires this interpretation in order to read into DE4105206 that the flange extremity is a separate ring - see the Office Action on page 11, first paragraph. This point of view is however not consistent with the arguments used to read all features of former claim 42 into DE4105206 in the same office action. This inconsistency can be seen, for instance, from the considerations of the Examiner on page 8 of the present office action.

Using this alternative point of view as starting point, if the flange extension (reference number of DE4105206 is 6) is to be considered as a separate ring, the second tubular section, being indicated (2) is not axially slidable over the first tubular section, whether one considers the single feature (1) or features (1) and (3) as combined into one single object. The inner diameter of the second tubular section (indicated by applicant as "Din2" in the attached drawings) is even smaller than the outer diameter Dout1 of the first tubular section. There is no sliding overlapping contact area between the two tubular sections indicated (2) and (1)+(3). The second tubular section merely ends against the first tubular section (1)+(3).

In this prior art, there is no sealing ring located between the outer diameter of the first tubular section and the inner diameter of the second tubular section in a sliding overlapping contact area of this first and second tubular section. A sliding contact, if any, is provided between the outer diameter of the first tubular section and the flange extremity being a distinct object, i.e. a separate ring.

Further, DE4105206 does not disclose the features of the clamp ring as in the amended claim 42 as mentioned above. DE4105206 merely mention the presence of a clamping ring (7). So also using this point of view, these features are lacking from DE4105206.

The applicants therefore conclude that when using this point of view, DE4105206 does not disclose each and every feature of amended claim 42.

The applicants believe that one of both starting points should be used consistently for finding features of amended claim 42 in DE4105206. The applicants conclude that no matter what starting point is used to find features of amended claim 42 in DE4105206, DE4105206 does not disclose each and every feature of the amended claim 42. Hence it is believed amended claim 42 is not anticipated by DE4105206.

For identical reasons, the applicant believes that DE4105206 does not disclose the subject matter of claim 44. This is because no matter what point of view is used as starting point (i.e. either understanding the flange extremity being a distinct object, i.e. a separate ring, or not), at least the same features as explained above for claim 42 are also lacking with respect to claim 44. Hence, for the same reason and using the same arguments, the applicants believe amended claim 44 is not anticipated by DE4105206.

Regarding claim 45, the claim clearly defines two tubular sections having an inner and outer wall, which are combined to provide an area of overlap. According to the wording of the claim, the second tubular section is provided with a flange extremity, which is a separate ring. Again, the applicants believe that DE4105206 does not disclose the subject matter of claim 45. This because no matter what point of view is used as starting point (i.e. either understanding the flange extremity being a distinct object, i.e. a separate ring, or not), at least the same features as for previous claims 42 and 44 are lacking when considering claim 45. Hence, for the similar reason and using similar arguments, the applicants believe amended claim 45 is not anticipated by DE4105206.

Amended claims 42, 44 and 45: Novelty over CH615988

The applicants respectfully disagree with the conclusion of the Examiner that all features of amended claim 42 are anticipated by CH615988.

According to the view point as used by the Examiner on page 2 of the present office action, one may consider the second tubular section to be one object indicated with references (4) and (2) together. The outer diameter (indicated “Dout1” by applicants) of the first tubular section is to be smaller than the inner diameter of the second tubular section (indicated “Din2*” by applicants) – see attached drawings. However, in this case, the flange extremity is not a separate ring, but an integral part of the second tubular section (4)+(2). A sliding overlapping contact area (to be understood as the zone indicated “A”) is obtained between the second tubular section and the first tubular section.

Hence in such interpretation, the feature of a flange extremity being a distinct object, i.e. a separate ring, is lacking.

The applicants further respectfully disagree with the statement of the Examiner that figure 1 of CH615988 illustrates the sealing ring (13) protruding in a sliding overlap contact area of the two tubular sections. The contact area where the two tubular sections are in sliding overlap is to be understood as the zone indicated “A”, as also indicated by the Examiner in the present office action. The applicants understand that the sealing ring is clamped between the two elements in a zone indicated “B”. The applicants submit that the sealing ring does not protrude in zone “A”, nor that there is any part of the description of CH615988 indicates that such protrusion is likely to occur. Referring to CH615988, the applicants see schematically in figure 1, and read in the accompanying part of the description, that there is nothing in the figures or in the description that indicates that the sealing ring 13 would protrude between (2) and (8) in the sliding overlap area “A”.

The applicants conclude that CH615988 does not disclose each and every feature of the amended claim 42, because no distinct flange extremity is provided, nor a sealing ring in the sliding overlap area between the two tubular sections.

For the sake of argument applicants turn now to the alternative point of view with which the applicant disagree, namely that the flange extremity as a separate ring is disclosed in CH615988.

The Examiner requires this interpretation in order to read into CH615988 that the flange extremity is a separate ring, - see the argument on page 4, last paragraph of the final office action. This point of view is however not consistent with the arguments used to read all features of former claim 42 in CH615988, as used by the Examiner on page 2 of the office action.

The element as indicated with reference (2) in CH615988 is alleged to be the “flange extremity being a separate ring”. The second tubular section is the feature indicated with reference (4). The outer diameter (indicated “Dout1” in the applicants’ drawings attached) of the first tubular section is clearly not smaller, but to the contrary, larger than the inner diameter of the second tubular section (indicated “Din2” by applicants in the attached drawings).

Even more, the second tubular section is not axially slidable over the first tubular section. As there is no sliding overlapping contact area, there is no sealing ring located between the outer diameter of the first tubular section and the inner diameter of the second tubular section in a sliding overlapping contact area of this first and second tubular section.

The sliding contact, if any, is provided between the outer diameter of the first tubular section and the flange extremity being a separate ring.

The applicants thus conclude that CH615988 does not disclose each and every feature of amended claim 42.

The applicants submit that one of both starting points should be used consistently for finding features of any of the claims in CH615988. The applicants conclude that no matter what starting point is used to find features of amended claim 42 in CH615988, CH615988 does not disclose each and every feature of amended claim 42. Hence it is believed amended claim 42 is not anticipated by CH615988.

For identical reasons, the applicants believe that CH615988 does not disclose the subject matter of claim 44. This is because no matter what point of view is used as starting point, (i.e. either

understanding the flange extremity being a distinct object, i.e. a separate ring, or not), at least the same features as for claim 42 are lacking when considering claim 44. Hence, for the same reason and using the same arguments, the applicants believe amended claim 44 is not anticipated by CH615988.

Regarding claim 45, the claim clearly defines two tubular sections having an inner and outer wall, which are combined to provide an area of overlap. According to the wording of the claim, the second tubular section is provided with a flange extremity, which is a separate ring. Again, the applicants believe that CH615988 does not disclose the subject matter of claim 45. This is because no matter what point of view is used as starting point, (i.e. either understanding the flange extremity being a distinct object, i.e. a separate ring, or not), at least the same features as for claim 42 or 44 are also lacking when considering claim 45. Hence, for the similar reason and using similar arguments, the applicants believe claim 45 is not anticipated by CH615988.

Amended claims 42, 44, 45: non obviousness over DE4105206 and CH615988

The applicants are of the opinion that a skilled person combining the two references, will not end up with the subject matter of claim 42, 44 or 45.

The skilled person, combining the references, will come to a coupling wherein possibly two sealing rings are used, one as in CH615988, being present in a recess of the abutment ring, against which the flange extremity is clamped, which flange extremity is an integral part of the second tubular section. The second sealing ring will be present in the sliding area between the first and second tubular section.

However, there is no hint or suggestion in either of the two references to separate the two functions of clamping and sealing by providing two distinct objects. The skilled person will not be taught nor suggested to design the two tubular sections in such a way that:

- the outer diameter of the first tubular section is smaller than the inner diameter of the second tubular section, the second tubular section being axially slidable over the first tubular section, in which sliding area a sealing ring is provided, and in the mean time

- providing a distinct object being a separate ring which is not used nor involved in creating this sliding overlapping contact area of this first and second tubular section, but which is interposed between the clamping ring and the tube end of the second tubular section to transfer the clamping force of the clamping ring to the tubular sections.

No hint is given in either of the references to separate the features as in the subject matter of claims 42, 44 or 45.

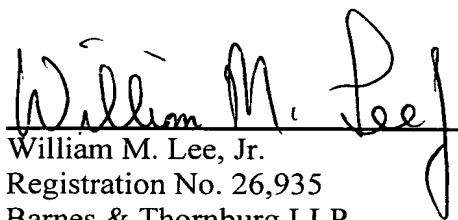
Hence it is believed that amended claims 42, 44 and 45 would not have been obvious over CH615988 and DE4105206.

In view of the foregoing and the amendment of the claims, it is submitted that the claims, as now cast, distinguish from and are allowable over the prior art, whether considered alone or in combination of their teachings. The Examiner's further and favorable reconsideration of the application is therefore urged.

No additional claims fees are due because the total number of claims and number of independent claims is equal to or less than the fees that the applicants have already paid.

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Respectfully submitted,



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